

## REMARKS

Applicant respectfully requests reconsideration of the present application in view of the reasons that follow. Claims 1-7 and 17-56 are now pending in this application.

### Rejections under 35 U.S.C. § 103

#### I. Obviousness Rejection over Bielfeldt, Luke and Reiniger

Claims 1, 4, 6, 7, 19-23, 26, 31-36, 39, 44-46, and 50-56 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,538,676 (“Bielfeldt”) in view of U.S. Patent No. 3,915,075 (“Luke”) and U.S. Patent No. 4,933,125 (“Reiniger”). This rejection is respectfully traversed.

The Office Action asserts that these patents teach certain features or limitations. In this reply, to conserve the resources of applicant and the Office, applicant chooses to focus on Luke, and Bielfeldt as it relates to Luke. Applicant’s silence on the other alleged teachings of the prior art should not be construed as acquiescence.

Luke discloses an apparatus for making plastic rods, such as a rod for tobacco-smoke filtering material. *See* Luke at col. 1, lines 6-9. Luke discloses that a plastic rod 13 is extruded from a die 20, conducted through a tube 20a made of a high thermal conductivity material, and introduced between a belt 1 and a tape 12 that wraps around the rod 13. *See* Luke at col. 2, line 27, to col. 3, line 3. Luke discloses that the belt 1 can be made of rubber and that instead of a tube 20a a wire-mesh belt can be provided. *See* Luke at col. 2, lines 31-37; col. 3, lines 3-4.

Bielfeldt discloses a process for the continuous production of particleboards made from wood chips that includes a woven metal wire belt 2, a preheating zone 8, a continuously operating press 1 that includes a movable press ram 12 and fixed press table 13, and a covering hood 11 arranged in the preheating zone 8. *See* Bielfeldt at col. 4, lines 16-35.

#### A.

In the table below, applicant points out some differences between Luke and

the applications for the production of particleboards.

Luke et al. (U.S. 3,915,075)	Particleboard Production (Bielfeldt)
Object of the invention is to provide effective entraining means for a rod of a plastics material	Process for the production of particleboards or fibreboards of especially oriented wood particles with a (phenolic) binder.
Pressure is denied to the rod as it should be leaving the apparatus unharmed for further processing.	Bielfeldt states (Cl, L23): "the use of continuously operating presses has hitherto not become established, because, as a result of the very high pressing factor...." Therefore a high pressure is used in the process for particleboards/fibreboards for curing the mat and for imprinting a surface.
Belt 1 is stretched with screws 9 and the distance between belt 12 and 1 is secured by the brackets 6a by means of bolts 14	Hydraulic means are used for bringing up the high pressure for the tension of the steel belts and to press the particles/fibres to a board.
2 endless belts: 1 and 12 out of plastic with an outer surface of foam Plastic belt 12 is wrapped to form a round hole for the rod	2 endless steel belts <b>AND</b> 1 metal mesh belt Nothing similar is happening to produce boards and it is not possible in a double steel belt press for producing particleboards to do a similar thing
C2, L31-48: "The belt may be a rubber belt, in which case its outer surface is advantageously faced with a layer of plastics foam material, such as . . . , for gripping and entraining the rod <b>WITHOUT</b> damaging it. ...."	The intention of the application of Bielfeldt is to make imprints on the particle board with the metal mesh belt
The DIE 20 produces the rod, therefore the double belt system enfolds a particularly ready product, similar to the continuous production of plastic pipes in which the extruded plastic is stabilized in water cooling beds or the like before cutting it to length	The double steel belt system produces the boards with a high amount of heat and pressure.

<p>Discussing the lines: C2, L67 – C3, L4: “The rod 13 is conducted from the die 20 through a tube 20a of a material having high thermal conductivity, for example copper or aluminum, by which the rod becomes cooled as well as being kept straight. Alternatively the rod may be CARRIED upon a wire mesh belt of such high-conductivity material.” The use of wire mesh belt is only stated as a replacement for tube 20. There is no statement about using pressure with the wire mesh belt and further it is not described how this wire mesh belt should be used other than a conveyor.</p>	<p>In applicant’s view, a person of skill in the art would understand this (left column) to mean that the tube 20a is not a moving part. The understanding of “carried” is like a treadmill, therefore there is no enwrapping or pressing by a metal mesh belt described in this part of the application. The metal mesh belt mentioned in Luke is only used as a conveying belt and not as an embossing belt. Further the conveying belt consisting of copper or aluminum has a high conductivity material, but does not have the necessary hardness to be used in a double belt press like in Bielfeldt and it is not used in a way like the metal mesh belts in the application by Bielfeldt or Haas.</p>
<p>Metal mesh belt consists only of copper or aluminum. Please note that it is not stated in the application that the metal mesh belt is used as belt 1 or 12. The belts 1 or 12 are explicitly shown as rubber belts. Further the metal mesh belt instead of #20a is not running through the installation with the belts 1/12.</p>	<p>The metal mesh belts are used as embossing means.</p>
<p>Please note Figure 3, which shows there the copper or aluminum metal mesh belt could be used instead of tube 20a.</p>	
<p>Please note the lines of claim 1: ....transport means for gripping and guiding the continuous extruded rod without damage AND deformation....</p>	

## B.

On page 3, the Office Action states the following three points about Luke: (1) Luke allegedly shows “that it is known to carry out a method of molding cellulose articles wherein the cellulose article is carried on a metal mesh belt”; (2) “Luke and Bielfeldt are combinable because they are concerned with a similar technical field, namely, methods of molding cellulose articles”; and (3) it would have been obvious “to use Luke’s copper mesh belt for that in Bielfeldt’s molding process in order to satisfy the desired relative thermal properties of

the two belts.” Applicant addresses those statements in turn below.

1. Applicant respectfully submits that the Office Action is mistaken in characterizing the Luke rods as “cellulose articles.” Cellulose is a natural carbohydrate. See, e.g., Hawley’s Chemical Dictionary. The Luke rods that the Office Action relies on are not natural cellulose, but rather cellulose acetate, which Hawley’s refers to as a chemical modification of cellulose. Luke itself refers to cellulose acetate as a plastic foam material. Col. 3, lines 56 – 62. Indeed, Luke limits its application to plastic materials and foam materials. *See* Luke at col. 3, lines 55-65. Accordingly, it would not have been obvious to one with ordinary skill in the art to combine Luke and Bielfeldt because, contrary to the Office Action, Luke is not concerned with the method of molding cellulose materials.

2. Applicant respectfully submits that the Office Action is mistaken also in characterizing Luke and Bielfeldt as being “concerned with a similar technical field, namely, methods of molding cellulose articles.” Luke and Bielfeldt are not combinable because they are not concerned with a similar technical field. Luke is non-analogous art. For example, Luke is classified differently (both in international and U.S. classification systems) from the other applied references. In databases, applicant tracked newer applications which cite Luke. According to the European espacenet service these were:

US 5958327, WO1996 15061, and DE 28 36 030.

These applications, which cite Luke, are all in the technical field of producing cigarettes or the filter rods, therefore applicant submits that a person of skill in the art accustomed to work in the field of producing fibreboards would never take a look in Luke, because it has happened never before that Luke has been mentioned in an application regarding methods for producing fibreboards.

Additionally, as discussed above, Luke’s rod is a synthetic plastic, foam material. In contrast, Bielfeldt’s process uses natural wood chips, called large-surface oriented wood particles. *See* Bielfeldt, e.g., col. 1, line 32, and col. 2, line 49. Wood particles have

different properties from synthetic plastic materials and synthetic foam materials (cellulose acetate).

Accordingly, it would not have been obvious to one of ordinary skill in the art to look to the teachings of Luke. For this reason also, it would not have been obvious to one of ordinary skill in the art to modify the process of Bielfeldt by the teachings of Luke.

3. Applicant respectfully submits that the Office Action is further mistaken in stating that it would have been obvious "to use Luke's copper mesh belt for that in Bielfeldt's molding process." Moreover, Luke has so many differences in technology and use of the belt that even if it were a properly combinable reference, it teaches away.

Luke's copper mesh belt lacks the necessary hardness to be used in a double belt press like Bielfeldt's, where the woven metal belt is pressed by the press platens. In addition, Luke's mesh belt is used to cool the plastic rods being carried. Col. 3, lines 1-4. In contrast, the woven metal belt of Bielfeldt is used to heat the wood material mat. Col. 3, lines 46-48.

Luke also teaches away from Bielfeldt. Luke describes taking care to avoid altering the surface of its extruded plastic rod. For example, claims 1 and 9 recite that Luke's apparatus handles its extruded plastic rod "without damage and deformation to the rod." This teaches away from Bielfeldt which requires that the mesh belt make imprints on the wood particle board. In short, Luke teaches away from Bielfeldt because Bielfeldt requires the metal mesh belt to alter the particle board's surface while Luke requires the metal mesh belt not to alter the rod's surface.

Furthermore, this non-altering or non-deformation teaching of Luke directly teaches away from the requirement of applicant's independent claim 31, which recites that "the metal mesh belt texturizes a surface of the mat."

Accordingly, Luke is not properly combinable with Bielfeldt.

### C.

In addition, page 3 of the Office Action regarding Bielfeldt states that "unless the

method is taking place in a very hot room, there would easily be a 40°C temperature difference between a 100°C mesh belt and a non-heated steel belt." However, Bielfeldt does not teach "a non-heated steel belt" and applicant respectfully submits that there is no basis in Bielfeldt for such a speculation. Indeed, just the opposite is the case. The steel belts in Bielfeldt are heated. See, e.g., col. 3, lines 36 – 40.

For at least the reasons noted above, withdrawal of this rejection is respectfully requested for claims 1, 19, and 31. The withdrawal of the rejection is also respectfully requested for claims 4, 6, 7, 20-23, 26, 32-36, 44-46, and 50-56. Claims 4, 6, 7, 44, 51, and 54 are dependent on claim 1, claims 20, 21, 26, 45, 50, and 52 are dependent on claim 19, and claims 32-34 and 46 are dependent on claim 31. Because claims 1, 19, and 31 ought to be allowable, claims 4, 6, 7, 20, 21, 26, 32-34, 44-46, 50-52, and 54 ought to be allowable. Claims 22, 23, 35, 36, 53, 55, and 56 are all at their root dependent on claim 1, 19, or 31. Again, because claims 1, 19, and 31 ought to be allowable, claims 22, 23, 35, 36, 53, 55, and 56 ought to be allowable.

## **II. Obviousness Rejection over Bielfeldt, Beck, Reiniger, and Bielfeldt '980**

Claims 2, 3, 5, 18, 24, 25, 25, 27, 28, 30, 37, 38, 40, 41, and 43 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bielfeldt, U.S. Patent No. 3,776,538 ("Beck"), and Reiniger as supposedly applied to claim 1 and further in view of U.S. Patent No. 5,762,980 ("Bielfeldt '980"). This rejection is respectfully traversed.

The actual rejection applied to claim 1 did not cite Beck. Indeed, in a previous Office Action, Beck was effectively withdrawn as a relied-upon reference. Accordingly, this rejection is improper as phrased. To the extent the Office Action intended to rely on Luke instead of Beck, these dependent claims ought to be allowable at least because their respective independent claims 1, 19, and 31 should be allowed for the reasons discussed in section I above. Withdrawal of this rejection is respectfully requested.

## **III. Obviousness Rejection over Bielfeldt, Luke, Reiniger, and the Background section of the instant specification**

Claims 17, 29, and 42 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bielfeldt, Luke, and Reiniger, further in view of the Background section of the instant specification. This rejection is respectfully traversed. Claim 17 depends from claim 1, claim 29 depends from claim 19, and claim 42 depends from claim 31. These dependent claims ought to be allowable at least because their respective independent claims 1, 19, and 31 should be allowed for the reasons discussed in section I above. Withdrawal of this rejection is respectfully requested.

**IV. Obviousness Rejection over Bielfeldt, Luke, Reiniger, the Background section of the instant specification, and Froese**

Claims 47-49 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bielfeldt, Luke, Reiniger, the Background section of the instant section, further in view of U.S. Patent No. 3,007,320 ("Froese"). This rejection is respectfully traversed. Claims 47-49 depend from claims 17, 29, and 42 respectively. Claim 17 depends from claim 1, claim 29 depends from claim 19, and claim 42 depends from claim 31. These dependent claims ought to be allowable at least because their respective independent claims 1, 19, and 31 should be allowed for the reasons discussed above. Withdrawal of this rejection is respectfully requested.

**Conclusion**

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to

charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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